

Exhibit 50

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**UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
SAN FRANCISCO DIVISION**

IN RE CATHODE RAY TUBE (CRT)
ANTITRUST LITIGATION

ALFRED H. SIEGEL, AS TRUSTEE OF THE
CIRCUIT CITY STORES, INC. LIQUIDATING
TRUST,

Plaintiff,

v.

HITACHI, LTD., et al.,

Defendants.

Case No. 3:11-cv-05502-SC

Master File No. 3:07-cv-05944-SC

MDL No. 1917

ALFRED H. SIEGEL, AS TRUSTEE OF THE
CIRCUIT CITY STORES, INC. LIQUIDATING
TRUST,

Plaintiff,

v.

Technicolor SA (f/k/a Thomson SA), et al.,

Defendants.

Case No. 13-cv-05261-SC

Master File No. 3:07-cv-05944-SC

MDL No. 1917

REPORT OF ALAN S. FRANKEL, Ph.D.

April 15, 2014

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1. Introduction

1.1. Assignment

1. Plaintiff Circuit City was a leading retailer of consumer electronic products during the period 1995-2007. Among other products, it sold video equipment and home office products, including TVs and computer-related products. Headquartered in Virginia, Circuit City operated stores throughout the United States.¹

2. Circuit City alleges that the Defendants and alleged co-conspirators colluded in setting prices of cathode ray tubes (“CRTs”) and that this caused Circuit City to pay higher prices for CRT Products – computer monitors and televisions that contained CRTs – than it would have paid absent the conspiracy.²

3. I have been asked by counsel for Circuit City to: (1) calculate damages under the assumption that the Defendants are found to be liable in this litigation; (2) assume that the alleged conspiracy resulted in anticompetitive overcharges for CRTs – the tubes incorporated into the CRT Products purchased by Circuit City – as determined by Dr. James McClave, another expert retained by Circuit City; (3) compute damages to account for the possibility that some overcharges resulting from the conspiracy might not be recoverable to the extent that they reflect CRTs manufactured by non-conspirators; and (4) calculate damages for Circuit City’s “direct” purchases of CRT Products from conspirators or their affiliates separately from its

¹ See, e.g., Circuit City SEC Form 10-K for the year ended February 28, 2007, p. 3. Circuit City is no longer in operation; it commenced a bankruptcy proceeding in 2008 and was subsequently liquidated. Circuit City SEC Form 8-K, November 1, 2010. Circuit City is represented in this case by the Circuit City Stores, Inc. Liquidating Trust. In this report, however, I use Circuit City throughout.

² See, e.g., First Amended Complaint, Alfred H. Siegel, as Trustee of The Circuit City Stores, Inc. Liquidating Trust v. Hitachi, Ltd., et al., October 17, 2013 (“Complaint”), ¶208. The conclusions and computations that I present in this report would either be unaffected by changes to the current Defendants and co-conspirators or could be modified through simple adjustments as described in this report to account for such changes.

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“indirect” purchases of CRT Products from other suppliers.

1.2. Qualifications

4. I am Director of Coherent Economics, LLC. Since 1985, I have been a full-time economic consultant. From 1985 until 1996, and from 2004 until I founded Coherent in 2008, I was an employee of Compass Lexecon (formerly Lexecon), most recently as a Senior Vice President.³ Between 1996 and 2004, I was an employee of LECG (formerly Law and Economics Consulting Group). I am also a Senior Editor of the Antitrust Law Journal, the leading law review devoted to economic and legal issues arising in antitrust, competition and consumer protection disputes. I have served on the Editorial Board of the Journal since 1996. I received a B.A. in economics (with honors) in 1982, an M.A. in economics in 1985, and a Ph.D. in economics in 1986, each from the University of Chicago. My primary field of concentration in the Ph.D. program was Industrial Organization, which includes the analysis of competitive issues which arise in antitrust disputes. I have analyzed economic issues arising in hundreds of legal, regulatory and public policy disputes. I have been engaged as an expert economist by governmental agencies including the United States Department of Justice, the Canadian Competition Bureau, the United Kingdom Office of Fair Trading, and the New Zealand Commerce Commission, as well as by many private parties. I have appeared as an expert witness in the United States District Courts for the Northern District of California, the Northern District of Illinois, the Eastern District of Pennsylvania, the Eastern District of Virginia, the District of Columbia, the U.S. Court of Federal Claims, and in California Superior Court in Alameda County. I have provided deposition testimony in additional U.S. jurisdictions. I have

³ I remain affiliated with Compass Lexecon as a Senior Advisor. Compass Lexecon, however, has had no involvement with my work in this engagement.

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case for which it no longer possesses detailed database information, as I describe in Part 4.2.3.²⁴

35. Exhibit 15 lists the CRT Product vendors appearing in Circuit City's data that Circuit City contends represent "direct" purchases as defined or to be defined legally. I designate CRT Products purchased from any other vendors to be "indirect." Exhibits 16a-b show, respectively, Circuit City's purchases of CRT TVs and monitors.

4.2.2. Matching CRT Product Sizes to CRT Sizes

36. TV and monitor purchases are tracked by size and are matched to the appropriate CRT size. Monitors and the CDTs incorporated within each monitor are generally the same size. Thus, the major CDT sizes are the same as the major monitor sizes: 14", 15", 17", and 19" (and 21" to a lesser extent). Stated TV screen sizes are typically one inch smaller than the CPTs incorporated within each TV for TVs up to 25 inches (diagonal size). The TV screen sizes are typically two inches smaller than the CPT sizes for larger TV sizes. I understand that this results from the masking that was used around the perimeter of the TV. The pattern is apparent when comparing the tube sizes in data provided to me by Dr. McClave with the TV and monitor sizes included in the purchase records of the fifteen firms.²⁵ Infrequently (across

²⁴ The absence of definitive data from which to compute damages, and the resulting need to make reasonable estimates, is a common occurrence in the analysis of antitrust damages. This arises naturally in the estimation of overcharges, because the "but-for" prices by definition cannot be directly observed, but often also because the defendants' conduct itself makes precision more difficult. See, e.g., American Bar Association, Proving Antitrust Damages (2nd ed. 2010), pp. 55-56. In this case, the long period of time during which Defendants and their co-conspirators are alleged to have engaged in unlawful, anticompetitive conduct and concealed that conduct, and in some cases their own lack or production of comprehensive sales records of finished products (which in any event would not encompass "indirect" purchases by Circuit City), means that a portion of the actual quantities purchased by Circuit City needs to be estimated.

²⁵ For example, the largest quantity of monitors by size were 17-inch models, and the largest quantity of CDT unit sales, by size, in Dr. McClave's data is also the 17-inch size, while there are no 18-inch CDTs. 13-inch TVs were very popular. There are no 13-inch CPTs in Dr. McClave's data, and a very large number of 14-inch CDTs. 24, 25 and especially 27-inch (the overall most popular size, accounting for 22% of total units) TVs were popular sizes, with

Exhibit 15 - Vendors Designated as "Direct" Purchases

Plaintiff	Conspirator	Direct Vendor Names Appearing in Data
Circuit City	Panasonic	JVC PANASONIC NORTH AMERI SANYO ENERGY
	Daewoo	DAEWOO INTERNATIONAL
	Hitachi	HITACHI AMERICA LTD
	LGE	LG ELECTRONICS
	Mitsubishi	mitsubishi DIGITAL EL NEC MITSUBISHI ELECTR
	Philips	PHILIPS CONSUMER ELEC
	Samsung	SAMSUNG
	Thomson	THOMSON MULTIMEDIA IN
	Toshiba	TOSHIBA AMERICA
	Zenith	APEX DIGITAL INC LG ELECTRONICS